Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (canceled)

2. (canceled)

3. (canceled)

4. (canceled)

5. (canceled)

6. (canceled)

7. (canceled)

8. (canceled)

9. (canceled)

10. (canceled)

11. (canceled)

12. (canceled)

13. (canceled)

14. (canceled)

15. (canceled)

16. (canceled)

17. (canceled)

18. (canceled)

19. (canceled)

20. (canceled)

21. (canceled)

22. (canceled)

23. (canceled)

24. (Original)   A method of segmenting a label switched path (LSP) present in a multi-protocol label switching (MPLS) network, the LSP having an ingress label switched router (LSR), an egress LSR and intermediate nodes, the method comprising steps of:

> determining a subpath to be segmented in the LSP;
> defining segments in the subpath; and
> associating a label to each segment defined in the subpath.

25. (Original)   The method of claim 24, wherein:

> the ingress LSR and the egress LSR have a predetermined capability;
> at least a subset of said intermediate nodes are LSRs having the predetermined capability; and
> the step of defining segments in the subpath includes defining segments between LSRs having the predetermined capability.

26. (Original) The method of claim 25, further comprising a step of notifying nodes in the LSP of the segmentation of the subpath.

27. (Original) The method of claim 26, wherein notifying the nodes includes providing information to the nodes regarding a processing of data transfer units (DTUs) labeled in accordance with the labels associated with the segments of the subpath.

28. (Original) The method of claim 27, wherein notifying the nodes is effected with a label distribution protocol (LDP).

29. (Original) The method of claim 27, wherein the DTUs includes information processible by LSRs having the predetermined capability.

30. (Original) The method of claim 26, wherein the nodes include LSRs lacking the predetermined capability.

31. (Original) The method of claim 27, wherein the information includes routing information.

32. (Original) The method of claim 29, wherein the predetermined capability is an operation and maintenance (OAM) processing capability.

33. (Original) The method of claim 32, wherein the information processible by LSRs having the predetermined capability is OAM information, the OAM information and the processing capability for determining a performance of a segment of the subpath.

34. (Original) A method of routing a data transmission unit (DTU) in a multi-protocol label switching (MPLS) network, the method comprising steps of:

determining a subpath of the MPLS network, the subpath to be traveled by the DTU;

defining a label for the DTU in accordance with labeled segments of the subpath; and

binding the label to the DTU.

35. (Original) The method of claim 33, wherein the DTU includes operation and maintenance (OAM) information.

36. (Original) A method of determining a performance of a multi-protocol label switching (MPLS) network, the method comprising steps of:

      generating a data transmission unit (DTU) having operation and maintenance (OAM) information;

      determining a subpath of the MPLS network, the subpath to be traveled by the DTU;

      defining a label for the DTU in accordance with labeled segments of the subpath;

      binding the label to the DTU; and

      inputting the DTU to the MPLS network, the predetermined path having nodes for processing the DTU OAM information for determining the performance of the labeled segments of the subpath of the MPLS network.

37. (Original) The method of claim 35, wherein the nodes for processing the DTU OAM information include a label switched router (LSR).

38. (Original) The method of claim 35, wherein the OAM information includes a time stamp, the nodes determining a transit time of the DTU along the subpath in accordance with the time stamp.

39. (Currently Amended) A label switched router (LSR) of a multi-protocol label switching (MPLS) network, the LSR for routing data transmission units (DTUs) in the MPLS and for assessing a performance of the MPLS, the LSR comprising:

      an input module for receiving DTUs from an upstream node;

      a switch for receiving the DTUs from the ~~receiver unit~~ input module and for switching the DTUs;

      an output module for receiving the DTUs from the switch and for transmitting DTUs to a downstream node; and

      a processor for defining a label for the DTUs in accordance with labeled segments of ~~the~~ a subpath and for binding the label to the DTU.